

TURF PERSPECTIVES FROM A NEW AGRONOMIST

Kathy Antaya, CGCS, Agronomist
USGA Green Section, Northeast Region

This presentation will summarize some of the pests and problems encountered in the Northeast Region of the USGA Green Section during the 2001 growing season. An overview of maintenance strategies and practices employed by turfgrass managers in the area will also be offered.

The season started out with a bang as the spring thaw revealed significant amounts of dead turf in the northeast (mostly in New England). Crown hydration injury caused most of the damage. This injury typically occurs when warm temperatures cause turfgrass plants to lose cold tolerance. Melting snow and/or rain saturates the turf and is followed by a rapid drop in temperature. Ice crystal formation in the crown tissue damages cell membranes and *de*-hydrates cells. Shaded sites with poor surface drainage bore the brunt of the injury. Of course, *Poa annua* was hit hardest but even some creeping bentgrass succumbed to ice/cold injury. Unfortunately, late winter ice removal efforts were generally unsuccessful as the damage was already done. Early season aeration and overseeding helped some courses recover, but a very dry spring handicapped turf growth. In addition to the initial damage, the winter injury set up courses for problems later in the season due to the weak, shallow-rooted new *Poa annua* plants and immature seeded cultivars. Prevention of crown hydration injury is key. Efforts should be made to improve internal and surface drainage, eliminate trees (especially conifers) that cast afternoon shade on greens in winter, and properly prepare turf for dormancy. Use of impermeable covers may help to reduce snowmelt or rain from reaching a putting green surface (limiting turf saturation) but the covers have their own set of problems and restrictions.

Crown rotting anthracnose (CRA) was the talk of the season at many facilities. Several courses knew they were in for a long fight when they found active anthracnose just after snow melt! The common trait shared by many courses that lost turf to CRA was an unmitigated desire for faster green speeds. Extremely low cutting heights (below .12”), inadequate fertility, excessive grooming and topdressing throughout the season, and extended high-rate use of plant growth regulators seemed to promote infection. Generally, increasing nitrogen fertility (especially through use of granular products in the spring and the fall), eliminating abrasive cultural practices during stress periods, and correct use of fungicides can reduce the disease severity. Research also shows that an increase in height of cut of .03” (1/32”) can substantially increase leaf surface so that plants have more surface area for photosynthesis – increasing plant vigor. Further, some researchers say judicious use of lightweight rolling (three times per week or less) can “make up” for this cutting height increase but is less stressful.

Crabgrass also made headlines as many superintendents observed pre-emergent herbicide “failure” in mid summer. These areas tended to be non-irrigated roughs and southern exposure banks on bunkers and mounds. The non-irrigated areas had herbicide applied/timed properly but lack of rainfall precluded creation of the chemical barrier necessary to prevent weed seed

germination. Soil temperatures on sites with southern exposures warmed earlier than normal and crabgrass may have begun germinating before herbicides were applied. Sales of Acclaim and Drive made vendors smile!

In August, heavy rains coincided with hot temperatures, which dramatically increased disease pressure and the level of stress. Superintendents who regularly aerated (to improve rooting and infiltration), properly timed cultural practices, and treated greens preventatively for disease suffered minimal damage. Regrettably, one course tried to hasten drying after a cloudburst by using solid tine aeration through the standing water. They played golf that day but closed the course a few weeks later because several greens died! I guess there was a good reason why Dr. Rieke instructed us to avoid aeration on saturated soils!

An extended warm fall facilitated many course projects, but lack of moisture hampered seedling and sod establishment. After a severe season, many course officials were reconsidering *previously disregarded* USGA recommendations for tree removal and aeration. Fortunately, turf managers used this opportunity to eliminate problem trees, and aggressively aerate and overseed greens, tees, and fairways.

All in all, just another ho-hum season for turf managers in the Northeast!

Despite the erratic weather, good turf was seen on many courses. The common thread among these seemed to be “back to basics”. Superintendents that aerated properly, fertilized adequately, relied on hand watering/syringing, and raised cutting heights/avoided cultivation or topdressing when turf was under stress tended to have the most dependable, high quality playing surfaces. One superintendent confessed he had experimented with a popular snake oil program on three problem greens, “and they never looked better”! After reviewing his records, we noted he had also initiated deep tine aeration, topdressing, spoon-feeding, and hand watering that season! Hmmm...